

U.S. Patent Application No. 10/721,215
Request for Reconsideration dated January 6, 2006
Reply to Office Action of October 19, 2005

REMARKS

Reconsideration and continued examination of the above-identified application are respectfully requested. Claims 1-14 are pending in the present application.

At page 2 of the Office Action, the Examiner rejects claims 1-14 under 35 U.S.C. §103(a) as being unpatentable over Fife (U.S. Patent No. 6,051,044). The Examiner asserts that Fife discloses a method of forming a nitrided valve metal and that the nitriding can be performed at any or multiple processing stages. The Examiner further asserts that Fife discloses that the powder can be nitrided by exposure to air during the degassing of the ingot chip, and thus motivates one of ordinary skill to nitride early in the forming process. The Examiner further asserts that Fife discloses that the nitriding can take place during a thermal treatment at a temperature of 70° C to 500° C. The Examiner further asserts that Fife discloses an example wherein the nitriding takes place prior to oxidation in a nitrogen atmosphere and prior to deoxidation. The Examiner refers to other parts of Fife relating to thermal agglomeration, sintering, and hydrogen degassing. Further, the Examiner asserts that the nitriding taking place in Fife is at a higher temperature than the range set forth in the claims, but the Examiner asserts that the nitriding by air during passivation meets the pending claims. For the following reasons, this rejection is respectfully traversed.

Claim 1, as currently pending, recites a process of preparing a nitrided valve metal wherein the nitriding occurs during a heat treatment that is prior to a deoxidation step. Furthermore, claim 1 recites that the nitriding occurs at a temperature of from about 200° C to about 600° C.

Unlike the claimed invention, Fife does not teach or suggest all of the limitations of claim

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1 and the claims dependent on claim 1.

In particular, with respect to the Examiner's assertion that Fife discloses nitriding taking place during a thermal treatment at a temperature of 70° C to 500° C, it appears the Examiner is referring to col. 17, lines 23-30, of Fife. It is respectfully noted that in this particular passage, the niobium powder was first mixed with 4% magnesium powder and heated to 800° C in argon prior to being cooled and then nitrided. As the Examiner should appreciate, the mixing of the niobium powder with 4% magnesium powder is a deoxidation step and, therefore, this particular passage refers to a nitriding occurring after a deoxidation step. Accordingly, this passage of Fife clearly does not teach or suggest the claimed invention.

With respect to the nitriding discussed in Fife at col. 18, lines 9-35, and relied upon by the Examiner, it is respectfully noted that at this passage of Fife, the nitriding occurs at a temperature of no less than 752° C. In particular, at col. 18, lines 14-16, it states that after cooling the furnace, the nitrogen was pumped to a targeted level, and refers to the Table in col. 18. As the Examiner will note, temperatures for the nitriding are given, which are 752° C or 932° C. These temperatures are quite higher than the about 600° C set forth in claim 1 of the present application. Furthermore, it is noted that in the passages following this section, beginning at col. 18, line 32, the reference to the nitrogen doping at this stage is after deoxidation.

Furthermore, from a review of Fife, there appears to be no teaching or suggestion of nitriding a valve metal during a heat treatment that is prior to a deoxidation step wherein the nitriding occurs at a temperature of from about 200° C to about 600° C. The Examiner has not identified any part of Fife which shows nitriding at a temperature of from about 200° C to about

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600° C prior to a deoxidation step. The low temperatures mentioned in Fife are with respect to nitriding during or after a deoxidation step. Accordingly, contrary to the Examiner's assertions, Fife does not teach or suggest the claimed invention, and this rejection should be withdrawn. The Examiner is encouraged to contact the undersigned to discuss this matter by telephone should the Examiner believe that Fife does specifically show all of the limitations of claim 1 of the present application.

At page 4 of the Office Action, the Examiner then rejects claims 8 and 12 under 35 U.S.C. §103(a) as being unpatentable over Fife in view of Chang (U.S. Patent No. 5,448,447). The Examiner relies on Fife in the same manner as set forth in the above §102 rejection. The Examiner recognizes that Fife does not disclose a method which nitrides tantalum. The Examiner asserts that it would be obvious to use the method of Fife to nitride tantalum or niobium in view of the information provided in the background of Fife, as well as the assertion that Chang teaches that one of ordinary skill in the art can select tantalum instead of niobium to make a desirable capacitor. For the following reasons, this rejection is respectfully traversed.

With respect to the deficiencies set forth above with respect to Fife in the §102 rejection, the same deficiencies apply in the present obviousness rejection. Fife and Chang do not teach or suggest nitriding occurring prior to a deoxidation step wherein the nitriding occurs at a temperature of from 200° C to about 600° C. As stated above, Fife does not teach or suggest these particular steps of nitriding together to form a nitrided valve metal. Furthermore, Chang does not overcome these deficiencies as apparently appreciated by the Examiner.

For these reasons, this rejection should be withdrawn as well.

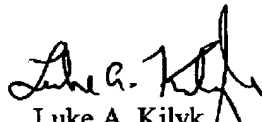
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CONCLUSION

In view of the foregoing remarks, Applicants respectfully request the reconsideration of this application and the timely allowance of the pending claims.

If there are any fees due in connection with the filing of this response, please charge the fees to Deposit Account No. 03-0060. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such extension is requested and should also be charged to said Deposit Account.

Respectfully submitted,


Luke A. Kilyk
Reg. No. 33,251

Atty. Docket No. 00014DIV (3600-267-02)
KILYK & BOWERSOX, P.L.L.C.
400 Holiday Court, Suite 102
Warrenton, VA 20186
Tel.: (540) 428-1701
Fax: (540) 428-1720